SRS Citizen's Advisory Board

SRS Citizens Advisory Board

Combined Committee Meeting

Meeting Summary

August 27, 2002
Holiday Inn
Beaufort, SC

The following were in attendance at the Savannah River Site (SRS) Citizens Advisory Board (CAB) Combined Committee Meeting held August 27, 2002, at the Holiday Inn in Beaufort, S.C.

CAB Members
David Adcock
Judy Barnett
Nancy Ann Ciehanski
Ann Dalton
Beckie Gaston-Dawson
Gerald Devitt
Mel Galin
Perry Holcomb
William Lawrence
J.G. Long
Jimmy Mackey
Lola Richardson
Murray Riley
Heather Simmons
Marty Stringer
Jean Sulc
Bill Vogele
Wade Waters
Gloria Williams Way
Carolyne Williams
Bill Willoughby

Stakeholders
Jim Sanders
Tiajuana Cochnauer
Mike French
Bob Meisenhaumer
Don Kantor
Howard Cahill
Ernie Chaput
Bill Adams
Tom Burns

Regulators
Keith Collinsworth, SCDHEC
Chuck Gorman, SCDHEC

DOE/Contractors
Tom Heenan, DOE
Charlie Anderson, DOE
Becky Craft, DOE
Larry Ling, DOE
Sachiko McAlhaney, DOE
Gerri Flemming, DOE
Thomas Johnson, DOE
Harold Conner, WSRC
George Klipa, WSRC
Troy Donahue, WSRC
Howard Walls, WSRC
Teresa Haas, WSRC
Jim Moore, WSRC
Lyddie Broussard, WSRC
Dawn Haygood, WSRC
Kelly Way, WSRC
John Dickenson, WSRC
Sonny Goldston, WSRC
Ron Malanowski, WSRC
Jim Heffner, WSRC

The following SRS Citizens Advisory Board members were absent: Meryl Alalof, Ken Goad, Vera Jordan and Dorene Richardson. Mike Schoener facilitated the meeting.

Tom Heenan, DOE, briefly discussed a recent trip report by Paul Golan of Department of Energy (DOE)-Headquarters that was submitted in a letter from Assistant Secretary Jessie Roberson to the Defense Nuclear Facilities Safety Board (DNFSB). The letter address the need for SRS to establish better job performance incentives and basically presented three conclusions: 1) risk prioritization is inactive and ineffective; 2) the cost structure at SRS is too high; and 3) contract incentives are not clearly aligned. Mr. Heenan noted that DOE-SR was in the process of developing performance-based incentives when Mr.

Golan visited the site, who since has emailed the site manager that DOE-SR is on the right track. There was brief discussion about a recent message from WSRC President Bob Pedde (see attachment) regarding realignment of the contractor and resulting potential layoffs.

Long Term Stewardship Committee Status

Nancy Ann Ciehanski asked if there were questions concerning the LTS Committee Charter that was forwarded to the CAB members. Mr. Mackey suggested that the word Charter be changed to Guidelines.

Ms. Ciehanski stated that the LTS Committee met on August 7 with 22 people and four reports. Mr. Cook reported on the Composite Analysis, Mr. Borup spoke on the status of the site at closure, Mr. Ryan spoke on the National Environmental Research Park (NERP), and Mr. Vought spoke on the status of the site as a National Security Site. She also mentioned that Oak Ridge was not able to obtain a trust fund for long-term stewardship. Ms. Ciehanski reported on the results of the August 26 meeting also. The next meeting of the LTS Committee will be held sometime in late September or early October.

Waste Management Committee

Bill Willoughby provided information to the group on the upcoming Waste Management Committee meeting to be held at the North Augusta Community Center, September 10 activities. The agenda includes soft-sided bags, a review and status of recommendations, TRU waste, and a high level waste (HLW) update. He then outlined the topics for today's meeting and introduced the next presenter.

Transuranic (TRU) Waste and Soft sided Bags status

Sonny Goldston, Solid Waste, British Nuclear Fuels Limited, gave the group a brief update on Compacted vs. non-Compacted waste and the TRU waste shipments. He emphasized that the CAB's recommendations have been taken into account. He said the CAB had asked SW to look at soft-sided bags as opposed to the B12 containers. Solid Waste ran tests to look at the advantages and disadvantages of using the bags. They cost less and are self-compacting; however, there were concerns about handling the bags. Mr. Goldston stated he would cover the other concerns at the September 10 Waste Management meeting.

Mr. Goldston then provided an update about shipments from SRS to the Waste Isolation Pilot Plant (WIPP) in New Mexico. He stated that a minimum of 16 shipments will be completed by the end of FY 02, and Solid Waste expects to have three shipments per week in FY 03. Shipping waste to the Nevada Test Site is going well. Mixed waste has been shipped and some PCB contaminated waste has been sent to Oak Ridge. Low level waste and mixed waste shipments offsite are going well. SR had been storing the vitrified mixed waste in M-area. The U.S. Environmental Protection Administration has stated that SR could remove the mixed waste labels due to the robust nature of the glass waste form and dispose of it as low-level radioactive waste at SRS. SR expects that disposal in a week. Mr. Mackey, ER Committee chair, stated that the Ship to WIPP campaign was criticized in the Paul Golan trip report, but should not have been, and would appreciate the CAB's being kept apprised.

Tank 7 Ready for Waste Removal

Troy Donahue presented the Tank 7 HLW waste removal goal to remove and immobilize the waste from an old style tank, thereby significantly reducing the environmental threat caused by storage of high-level-radioactive waste in underground tanks. Tank 7 is an old style tank and a high priority. He stated that HLW has worked on Tank 7 for several years and is now ready to begin waste removal.

Mr. Donahue covered the Tank 7 Waste Removal scope, schedule, milestones and interfaces. The Americium Curium (AmCm) cold run is complete and Tank 18 is ready to transfer supernate. Tank 7 is

ready to slurry for supernate transfers from Tank 7 to Tank 33. The AmCm Transfer will be complete January 8, 2003, and Sludge batch 3 will be ready August 12, 2003. Both of these dates are ahead of the DOE commitment date schedule.

Mr. Donahue went on to explain that the project costs are running under by $640K. He continued by giving a description of Tank 7, which is an old style tank that was placed in service in 1954. It does have an annulus and approximately nine feet of dirt and asphalt on top of the tank. This tank can hold 750K gallons of waste. Mr. Donahue continued with Tank 7 fill data and operating plan information. The present level of the waste is 124 inches with the fill limit being 155 inches. Seventy-seven inches of this waste is sludge, and 47 inches is supernate.

Mr. Donahue explained that recent camera inspections of the tank showed no leak sites. This tank will continue to be monitored for leaks during the waste removal activities by conductivity probes and constant air monitors. He showed actual pictures from inside Tank 7. A team looked at the risks associated with large leak sites, which have never been encountered at SRS, and looked at small leak site risks. Safety measures are in place if leaks are encountered. Mr. Donahue emphasized that operator training is built on the knowledge gained in the Tank 8 campaign. Modifications are included in the operator training.

Various checklists and readiness assessments have been developed, and independent evaluations have been performed. In summary, Mr. Donahue stated that Tank 7 waste removal evolution is safe, reduces risks, and provides data for planning salt removal from other tanks.

Mr. Willoughby questioned the latest point made in the press that tanks should be completely empty, almost to the point of scouring them. He asked Mr. Donahue for comment on the practicality of that suggestion. Mr. Donahue contended that SR will do what is economic and safe.

Mr. Willoughby asked what measures must be employed to remove all the waste from a tank. Mr. Anderson, DOE-AM for HLW, offered the CAB a briefing on Tank Closure and Waste Removal at a later date, but emphasized that Mr. Donahue had come prepared to discuss Tank 7 only. Mr. Willoughby asked for written criteria that address where waste removal stops. Mr. Anderson stated that these criteria are covered in the Tank Closure Environmental Impact Statement and the Record of Decision, as well as in Tier 1 and 2 reports for each tank.

Wade Waters asked that an annulus cleaning discussion be incorporated in the next Waste Management meeting. Mr. Mackey asked about the Snake River Alliance lawsuit regarding the grouting of the tank. Mr. Anderson emphasized the positive and significant steps that SR is taking. This tank is a type I tank and SR is getting the material out and sending it to Sludge Batch 3. HLW is reducing risks and getting out of Type I tanks.

<u>DNFSB-Savannah River Site High Level Waste Disposition Activities</u>

Mr. Burns gave the group an overall perspective of the Defense Nuclear Facilities Safety Board (DNFSB) on HLW. He gave a brief background of the Board and the site representatives. He continued by highlighting the six most recent Board letters on HLW activities, including the board's views on salt disposition and tank issues.

He stated that the Board's three overall objectives are to identify safe and technically sound disposition paths and end-states, to adopt robust disposition plans that account for technical, financial, and regulatory uncertainties, and to execute waste disposition and tank closure activities in a safe manner.

Mr. Burns stated that the Board believes DOE should pursue several salt disposition paths and is closely following DOE Salt Processing Facility capabilities. He added that alternate backup technologies need to

be pursued for the several reasons including, technical risk, faster implementation on a smaller scale, and the potential application for Tank 48 recovery.

The Board also believes that the site needs to move forward with identified sludge processing improvements and avoid any DWPF feed breaks.

With regards to the HLW tanks, the Board believes that the site should continue their efforts to enhance tank space margin. This could be achieved by minimizing the DWPF recycle influent stream and returning former In Tank Precipitation type III tanks to service. In regards to the tank closure process, the Board thinks that the site should continue with technology development and improvements. The site should also continue to work with the regulators to identify the mutually acceptable closure end states.

Bill Vogele asked if the DNFSB had responded to Ms. Jessie Roberson's letter of July 26, 2002, to which Mr. Burns responded that they had not. Gerald Devitt asked for clarification of the arbitration process if the Board members, the Secretary of Energy, and DOE disagreed. Mr. Burns explained that the process is outlined in the Board's Enabling Legislation. Briefly explained, however, the Board can make recommendations to the Secretary. The Secretary can accept or reject them. If he rejects the recommendation, he does so in writing to the Board. The Board can accept or send a Reaffirming Recommendation to the Secretary. A 30-day public comment period is then put into place. If the Secretary still rejects the recommendation, then the rejection must be documented in the *Federal Register* and forwarded to the appropriate Congressional Committees.

Nuclear Materials Committee

Plutonium Update

William Lawrence, NM Committee Vice Chair, stated the cancellation of the Immobilization Facility has his committee concerned about the alternate disposition path for the Plutonium (Pu) that had been projected to be processed through that facility. He introduced George Klipa, DOE to brief the CAB members on the current status of this Pu.

Mr. Klipa stated that he had returned from DOE headquarters last week as a member of one of the twelve (12) teams created by Assistant Secretary Jessie Roberson. Each team has been formed to evaluate specific areas of concern as part of the Top-to-Bottom Review. The teams expect to get approval for their specific projects by September 30, 2002. Proposed recommendations from each team are expected by March 2003.

Mr. Klipa and Allen Gunter of DOE-SR are members of the team whose specific purpose is to find ways to expedite the disposition of all Environmental Management (EM) nuclear materials, including Pu. Mr. Klipa explained that the conclusions reached by this team may change some previously identified disposition pathways for some nuclear materials. As a result, these disposition pathways may be different than those laid out in the response given to CAB Recommendation Number 156 – F-Canyon Suspension. Mr. Klipa said that the National Environmental Policy Act (NEPA) studies would be delayed until the proposed recommendations are evaluated.

In response to a question about the past confusion about what Pu was under the CAB's charter, Sachiko McAlhany of DOE stated that the Pu was under EM's control and information would be made available to the CAB.

When asked if the teams were looking at consolidating materials from the different sites, Mr. Klipa responded that the cost effectiveness and security aspects of consolidation were some of the issues that are being evaluated and while no decision has been made, SRS may play a role in consolidation efforts. He advised the CAB members that they would be informed once more definitive information was available.

F-Canyon Suspension Status Update

Steve Williams, WSRC, opened his presentation with an overview of the de-activation order status. He reminded the CAB that agreement between DOE and the DNFSBwas needed to proceed with de-activation. He said that at this time the discussions between DOE and the DNFSB are ongoing.

Mr. Williams explained that while an order to de-activate has not been given, suspension activities are continuing with facility stabilization actions in progress. While some surveillances have been suspended and some preventive maintenance actions deferred, he emphasized that the F-Canyon equipment will continue to be maintained until authorization to implement de-activation plans has been received.

He stated that vessel-flushing activities are ongoing and the results are encouraging. Testing has shown that the remaining vessel heels are exceeding expectations and the vessels are being converted to non-hazardous states.

According to Mr. Williams, progress is also being made in the area of de-inventorying of chemical hazards. Activities include systematically emptying tanks as well as reducing the inventory of solid and liquid chemicals.

Solvent pretreatment actions are now taking place to clean the material as much as possible while the F-Canyon equipment is still operable. Mr. Williams said that the solvent washing was producing good results and the Savannah River Technology Center (SRTC) is working to determine the optimum choice for final disposition of the PUREX solvent.

Mr. Williams spoke of the Am/Cm transfer to HLW. He referenced the cold run test and said that the transfer date is still forecasted ahead of schedule for the end of 2002.

He said that the de-staffing of F-Canyon personnel continues but no one has lost their job. The expanded missions of H-Canyon including the Highly Enriched Uranium Blend Down Project has demonstrated a good management of existing resources through the transfer of experienced personnel from F-Canyon to H-Canyon according to Mr. Williams.

Mr. Williams then presented the current status of each of the teams assigned to work on alternate end states:

- Team 1 is working to determine how the chemical receipt services provided by F-Canyon for other site facilities can be handled. Providing this capability in H-Canyon appears to be the preferred option, but a decision is not expected until September 2002.
- Team 2 is presently determining options for the handling of contaminated water with a focus on reducing and/or eliminating water sources.
- Team 3 is considering options for the disposal of lab waste. While trucking lab solutions to H area seems to be the best option, work is still underway to determine a specific location and needed funding.
- Team 4 is challenged to disposition 60,000 gallons of process solvent. The plans are currently under management review but additional funding will be needed to remove the PUREX solvent from F-Canyon.
- Team 5 studied several options to address the disposition of 138,000 gallons of uranyl nitrate solutions. Final disposition cost estimates vary widely and will be dependent in part on HLW and Solid Waste schedules. Transfer of the solutions is not expected until 2004 – 2005.

Questions relating to the purity of the uranyl nitrate solutions as well as estimates for a hypothetical restart of F-Canyon after reaching cold, dark and dry were fielded. Mr. Williams concluded his

presentation with a schedule summary and restated his commitment to return to the CAB to provide periodic updates.

Nuclear Materials Stabilization Program Update

John Dickenson began his presentation with an overview of the mission of the Nuclear Materials Management Division (NMMD) and a summary of the major program drivers associated with recovering, stabilizing, and controlling nuclear material. He reminded the CAB of the DNFSB recommendations that addressed the need to reduce or eliminate potential safety risks associated with the legacy materials left over from cold war operations. He also discussed several Environmental Impact Statements (EISs) that assigned responsibilities to SRS.

Mr. Dickenson provided a short description of the current major projects and pointed out that the CAB had received presentations on most of them during this year. He also identified each of the eight major nuclear facilities that comprise the storage and processing facilities of NMMD. The status of each is as follows:

- Spent Nuclear Fuel Facilities
    - The K Area Material Storage (KAMs) project is complete and will be used for storing Pu.
    - K Basin is currently storing SRS origin spent fuel that is being shipped to H Canyon for stabilization processing. The removal of spent fuel from K Basin is within weeks of completion and deactivation activities of the basin will begin shortly thereafter.
    - Heavy Water Moderator will be continued to be stored in K Area until DOE decides its use.
    - HEU solid material stored in K Area. It will be shipped to a Tennessee Valley Authority (TVA) vendor in support of the HEU Blend Down Project.
    - In the L Area basin we are actively taking receipts of foreign spent nuclear fuel.
    - The Receiving Basin for Offsite Fuel is currently undergoing a de-inventory operation and transferring the material to the L Area basin.

- Canyons
    - As stated in the earlier presentation, F-Canyon is undergoing suspension activities.
    - H- Canyon has multiple missions but the major emphasis at this time is the HEU Blend Down Project.

- B-Lines
    - FB-Line provides residue characterization to determine the best method of material disposition. The Pu packaging project is under construction in FB-Line and when completed will provide the capability to weld outer cans around the inner cans which contain Pu to meet the DOE Standard 3013 for packaging. HB-Line provides stabilization activities for Pu as well as residues characterized as requiring dissolution.

Mr. Dickenson stated that much progress has been made in meeting stabilization commitments. At the current time 82 percent of the stabilization commitments have been completed. He detailed each of the materials and provided the specific quantities and the required facility interfaces.

During an overview of the F and H Area facilities, he explained each of the inputs and outputs of the processes. He concluded his presentation by responding to numerous questions about the various processes

Environmental Restoration Committee

Jim Heffner, WSRC, provided a briefing on the Annual SRS Environmental Report for 2001 (see attachment). He began by summarizing the monitoring results noting that SRS 2001 airborne and liquid

releases, as well as all potential radiation doses from the site, were well below applicable regulatory standards. The objectives of the monitoring program are to quantify impacts of site operations on the surrounding environment and to members of the public. Monitoring activities are conducted on and offsite for air and water, environmental surveillance and groundwater. The drivers for the program include state and federal regulations, DOE Orders, Best Management Practices and the ALARA Principle (As Low As Reasonably Achievable).

Effluent Monitoring is the collection and analysis of samples or measurements of liquid and gaseous effluents for the purpose of characterizing and quantifying contaminants in a process stream, assessing radiation exposure to members of the public and demonstrating compliance with applicable standards. Environmental Surveillance is the collection and analysis of sample of air, water, soil, foodstuffs, biota and other media from DOE sites and their environs and the measurement of external radiation to demonstrate compliance with applicable standards and conduct assessments. Mr. Heffner discussed atmospheric Tritium releases since 1960, contaminant pathways, types of surveillance samples and analytes. He presented the 2001 dose calculations, which were a total of 0.18 mrem for individuals and .07 mrem for drinking water. Mr. Heffner discussed dose standards for comparison noting that local background radiation is 300 mrem per year and the drinking water standard is 4 mrem per year. He presented 2001 highlights and contributors to the dose and concluded by stating SRS knows what is out there and the public is safe.

Board members questioned how water is treated and where phytoremediation impacts dose. The Board requested more information regarding peaks in the historical charts of tritium releases provided, which Mr. Heffner explained was when reactors were operational. Mr. Heffner also responded to a question regarding air monitoring near the phytoremediation project, noting SRS can see no difference in air sampling.

Thomas Johnson, DOE, provided an update on the Integrator Operable Units (IOUs)(see attachment). SRS is divided into six integrator operable units by watersheds and remedial workplans have been developed for each unit. Mr. Johnson described the phases of the IOU Program, noting that Phase I is nearly completed. Phase I is the evaluation of existing data and need for early actions, the identification of additional data needs and concludes with workplan approval. Phase II of the program (sampling and analyses of proposed areas & implementation of early actions) will continue until 2019. Periodic reports are provided every two years following submittal of the workplan. Final remedial activities at all IOUs are expected to be complete in Phase III by 2035. Mr. Johnson discussed the stakeholder involvement in the program and provided a status report on each of the following six operable units:

Steel Creek	Rev. 1 approved 9/12/00	Periodic Report in comment resolution
Savannah River/Swamp	Rev. 1 approved by DHEC 1/29/02	Periodic Report being developed for 1/03
Fourmile Branch	Rev. 1.2 approved 3/13/02	Sampling completed; Periodic Report being developed for 1/03
Lower Three Runs	Rev. 1.1 approved 3/22/02	Sampling in progress; Periodic Report scheduled for 1/04
Pen Branch	Rev. 0 submitted 1/30/02	In comment resolution; Sampling in progress
Upper Three Runs	Scoping Meetings Complete; Rev. 0	

	scheduled for 8/30/02 submittal	

Board members asked what would happen if future sampling exceeded standards. Mr. Johnson discussed the notification process in response. Board members questions why some monitoring was conducted so far north of the site and asked about coordination with landowners. SRS works with the South Carolina Department of Health and Environmental Control (SCDHEC) to identify contributors and the State works with property owners. Chuck Gorman, SCDHEC, noted that the State monitors at control points for the site. Another question was raised regarding cesium in the soil, which was noted as a major issue across the country since moving the cesium or digging it up may cause more damage than leaving it in place and posted.

Strategic Initiatives Committee

National Environmental Policy Act Status

Drew Grainger, DOE, stated there were currently four EISs. They are:

- SRS High-Level Waste Tank Closure – The final EIS was approved May 2002. The Record of Decision was published August 19, 2002.
- Disposition of Scrap Metals from Radiological Areas – The draft EIS is scheduled for October 2002.
- Modern Pit Facility Siting EIS – The Notice of Intent is planned for September. Scoping meetings will be held in October. The draft SEIS is planned for the summer of 2003 with the final SEIS planned for April 2004.
- Amended Records of Decision
    - Storage and Disposition of Surplus Fissile Materials and Surplus Plutonium Disposition EIS: Supplement Analysis and Amended Record of Decision for "MOXable" plutonium in preparation.
    - Interim Management of Nuclear Materials EIS (1995) : Amended Record of Decision July 10, 2002, to add the Storage and Vitrification in the Defense Waste Processing Facility as an alternative for stabilizing the H-Canyon plutonium solutions.

There are three Environmental Assessments (EA). They are:

- Removal, Transportation, and Storage of Radioisotopic Thermoelectric Generators – SRS is a potential waste site. This EA is on hold pending a review of policy on disposal of Greater-Than-Class-C waste. It is being prepared by DOE-Environmental Management (EM).
- Implementation of a Comprehensive Management Program to Store, Transport, and Dispose of Potentially Reusable Uranium Materials – The draft EA was issued for comment in June 2002.
- National Resources Management Activities at SRS – It is currently being prepared. A draft Revised Finding of No Significant Impact may be prepared and circulated for comment.

Mr. Grainger stated that he has previously reported to the CAB concerning the combining of NEPA and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Mr. Grainger stated that the current guidance from DOE-Headquarters is the they will "…rely on the CERCLA process for environmental review of CERCLA actions." Therefore, SRS will no longer prepare Values Impact Assessments or similar documents. CERCLA documents such as the Engineering Evaluation/Cost Analysis (EE/CA) analysis will continue.

EE/CA analysis for the Closure of the R-Reactor Disassembly Basin – DOE released the EE/CA analysis for a thirty-day comment period May 2002. No comments were received. The expected release date of the final EIS was in August with action expected in Fiscal Year 2003.

Remediation of the General Separations Area Consolidation Unit – CERCLA document submittal is expected in May 2002.

For the Environmental Management (EM) Cleanup Reform Proposals, these proposals would be funded in Fiscal Year 2003. Some EIAs would be required to implement some of these proposals. As the proposals mature and are accepted and funded, they will assess the NEPA requirements.

CAB Recommendation

Mel Galin stated that the Strategic Initiatives Committee was considering a draft motion to institutionalize budget, plans and technology for all presentations to the SRS CAB. Mr. Galin said that the committee has reviewed the recommendation and it was now in the hands of the chairs of the other committees for review. Mr. Galin requested that everyone review the recommendation when it is distributed before the next CAB meeting.

In-Situ Vitrification

Bob Blundy, WSRC, stated that the Plasma In-Situ Vitrification process is a torch that reaches temperatures of 4,000 degrees centigrade to over 7,000 degrees centigrade. It vitrifies the soils similar to natural obsidian and has a leachability rate similar to Pyrex glass. A field test was conducted at SRS in 1996. While the test proved effective, it was decided that it would only be good for small hot spots and not effective for large areas due to cost and time. More economical solutions are available at SRS. This process is being used in other industries and has been considered for other used at other DOE sites.

Meeting handouts may be obtained by calling 1-800-249-8155.